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GUNSHOT WOUNDS OF THE CHEST

BY

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Division, North-West Field Force; Surgeon to the Montreal General Hospital.

Reprinted from the Canada Medical and Surgical Journal.

THE UNIVERSITY OF CHICAGO PRESS

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(Read before the Medico-Chirurgical Society of Montreal.)

CASE I.—*Penetrating Wound of Lung; Gangrene; Recovery.*

Corporal J. E. L., 90th Battalion, aged 24, was wounded at the Fish Creek fight on the 24th of April, 1885. He was shot in the chest while lying facing the ravine in which the enemy were concealed, at a distance of about one hundred yards from him. The bullet passed through the second left costal cartilage, beneath the sternum, downwards and outwards towards the right side, making its exit through the 7th rib in the mid-axillary line. Before being removed from the field he also received a flesh wound over the right trochanter major, which, although not in itself serious, added greatly to his sufferings on the journey to Saskatoon and subsequently. He, with the other wounded from Fish Creek, arrived in Saskatoon on the 2nd of May, having been driven forty-five miles in a lumber waggon over the "trail." The period of seven or eight days intervening between the time of his injury and his arrival at Saskatoon was one of very great hardship to a man in his condition. The weather was cold, especially at night, and windy, and a considerable part of the time wet; their only shelter was the ordinary "bell" tent, and there were neither the materials nor the facilities for making warm and soothing applications to the chest, nor was there any

suitable invalid diet. On arrival at Saskatoon, his condition was very bad indeed. The greater part of the right lung was consolidated, and his breathing painful and rapid. There was also high fever and troublesome diarrhoea. Empyema followed, and on the 8th of May Deputy-Surgeon-General Roddick enlarged the wound in the right axillary region, evacuating a quantity of pus which was very foetid. The pleural cavity was then washed out daily with antiseptic solutions (carbolic, alcoholic and boracic at different periods); and from time to time portions of gangrenous lung tissue presented at the wound and were removed. In spite of these precautions, however, he continued to suffer from high fever, perspirations, foetid discharge, and great weakness. On the 23rd of May, with the advice and assistance of Dr. Roddick, I attempted to make a dependent opening. The patient was etherized and an incision made in the eighth intercostal space, posteriorly. On reaching the pleura, however, the lung was found to be firmly adherent to the chest wall at this point. The wound was therefore closed and the original axillary wound enlarged, and the cavity explored with the finger and long probes. A considerable amount of sloughy tissue was found lying unattached in the cavity, and was removed. The cavity was then emptied as well as possible, and washed out with weak carbolic lotion. On introducing the finger into the cavity, it was found to be as large as a large-sized orange, and surrounded on all sides by pulmonary tissue. It was an intra-pulmonary cavity, and not, as we had supposed, a localized pleural sac. As he recovered from the ether, he was seized with a severe and prolonged fit of coughing, in which he expectorated pus and fluid from the pleural cavity which had a distinct carbolic odor, and caused unmistakeable tingling in his mouth. From this time forward the pus was expectorated constantly and freely, and in a day or two was free from smell. The wounds healed up rapidly. All his symptoms subsided, and from this time his recovery was uninterrupted. In a few days he was able to be taken out into the air and sunlight, and in a couple of weeks was convalescent. He was one of the last remaining patients at Saskatoon, and embarked on the hospital barge on the 4th of

July, and was discharged when he reached Winnipeg on the 15th of the same month. He has since enjoyed the best of health, and at the present time writes that he is quite well and strong. I have no doubt but that the thorough exploration of the cavity and the removal of sloughy tissue on the 23rd of May opened communication with a bronchial tube of considerable size, and that henceforth the cavity was kept freely evacuated by expectoration. This, I think, was the starting point on the road to his recovery, which progressed with marvellous rapidity from that time.

CASE II.—*Penetrating Wound of Chest.*

Private H. H. M., 10th R.G., aged 19, was wounded at Batoche on the 12th of May, 1885. When brought into the zareba he was suffering from dyspnoea and painful inspiration. He had also coughed up a little blood soon after receiving the wound. On examination, a bullet wound was found about an inch to the right of the vertebral column, opposite the fifth dorsal vertebra. The track of the bullet could be traced as far as the vertebral column, passing deeply through the muscles of the back, and the bullet itself (a round one) was felt beneath the skin at the angle of the left scapula. It was immediately removed, and the wounds cleansed and dressed with iodoform. There were no marked chest symptoms until after his removal to Saskatoon, where he arrived on the 15th. The wound was then suppurating freely, and he suffered from considerable pain and uneasiness in the side and high fever. A few days later the left chest was found to be gradually filling with fluid; a hypodermic needle was introduced, and half a drachm of odorless sero-pus withdrawn. The chest filled rapidly, and the patient suffered from chills and fever. The pleural cavity soon became filled to the apex, and displaced the heart slightly. The flow of pus from the wounds now became greatly increased, and pus was forced out from both wounds, but especially from the posterior one (the wound of entrance of the bullet), on coughing. I then administered ether, and made a free opening through the 7th intercostal space and in the existing wound, and evacuated

a large quantity of pus having a slightly foetid odor. Through this opening also came, at this time, pieces of red cloth from his tunic and pieces of his shirt and undershirt. On examination while the patient was under ether, a long probe passed directly into the pleural cavity from the original wound. The bullet was found to have passed between the spines of the 5th and 6th dorsal vertebræ, close to the bodies of the bones, and to have roughened the edges of both spines. The opening of the cavity and the insertion of a large drainage-tube gave great relief, and all the active symptoms subsided promptly, although the discharge continued for a long time. His recovery was slow. The pleural cavity was washed out with antiseptic solutions from time to time, and nourishing food and stimulants were administered, and the patient was soon able to leave his bed and go out into the fresh air and sunlight in daytime. He was brought down to Winnipeg on the hospital barge, still very weak, and placed in the General Hospital there on the 15th of July, under care of Dr. Kerr. He remained there for some time, and reached his home in Toronto, I believe, about the end of September. He is now perfectly well. There was great retraction of the chest wall during convalescence.

In this connection I wish to mention briefly two other cases which did not come under my observation at the time their injuries were received, but which I saw later on :

Pvte. L., 65th Batt., was wounded on the 28th of May at Frenchman's Butte. He was struck on the posterior wall of the right chest, the bullet making its exit in front at a point nearly opposite. He suffered from severe respiratory symptoms and spat up some blood, and a penetrating wound of the chest was diagnosed. He recovered rapidly, however, and when I saw him on the 12th of July, his wounds being then perfectly healed, there were no chest symptoms, no alteration in the conformation of the chest, and no physical signs to indicate that the pleural cavity or its contents had ever been disturbed in any way.

A similar case was that of Sergt. F., N.W.M.P., who was wounded about a week later, in Steele's engagement at Loon Lake. He also had very severe symptoms of pulmonary injury,